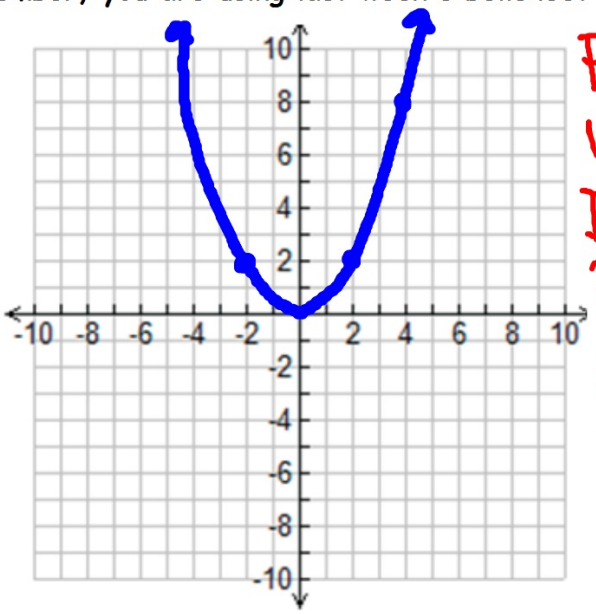
Bellwork: 11/7/12

Tell us three things about the graph below.

*remember, you are using last week's bellsheet



Function

Vertex: (0,0)

D: $(-\infty, \infty)$

R: $[0, \infty)$

Parabola

Algebra 2 Name

Notes – Analyzing Quadratic Graphs: has to include x^2 ~~graph is always a~~ parabola

Domain: x values from left to right

Range: y values from bottom to top

Max/Min: max → highest point, min → lowest point } vertex

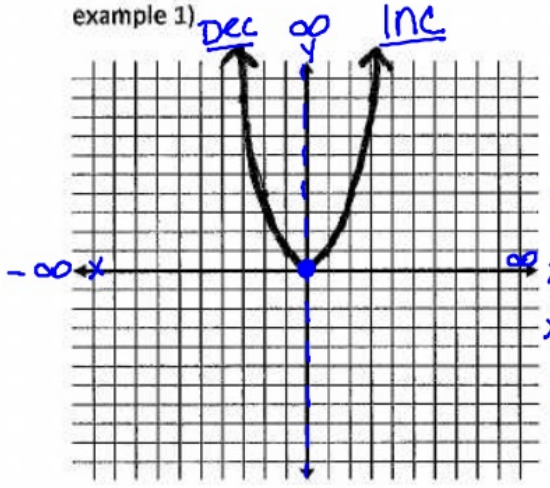
Interval of Increase: interval over the domain (x) where graph goes UP

Interval of Decrease: interval over the domain (x) where graph goes DOWN

x-intercept: point(s) that cross x axis

y-intercept: point(s) that cross y axis

example 1)



x L→R

y B→T

high | low Pt

xvalues ↑

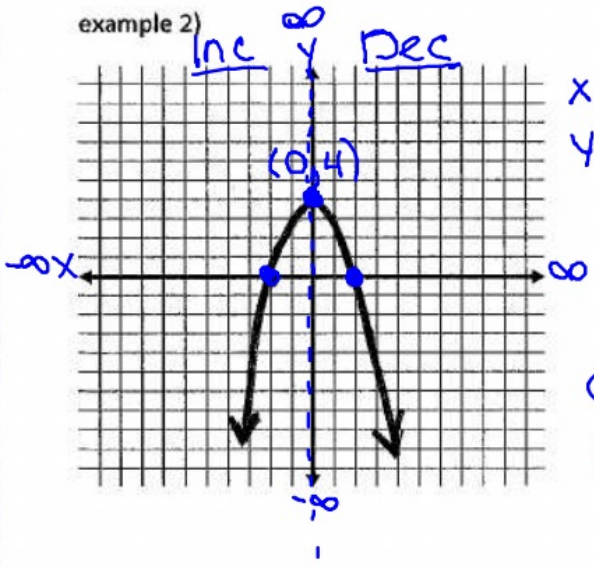
xvalues ↓

Pt cross x

Pt cross y

Domain	$(-\infty, \infty)$
Range	$[0, \infty)$
Max/Min	$(0,0)$
Increasing	$(0, \infty)$
Decreasing	$(-\infty, 0)$
x-intercept	$(0,0)$
y-intercept	$(0,0)$

example 2)



x L→R

y B→T

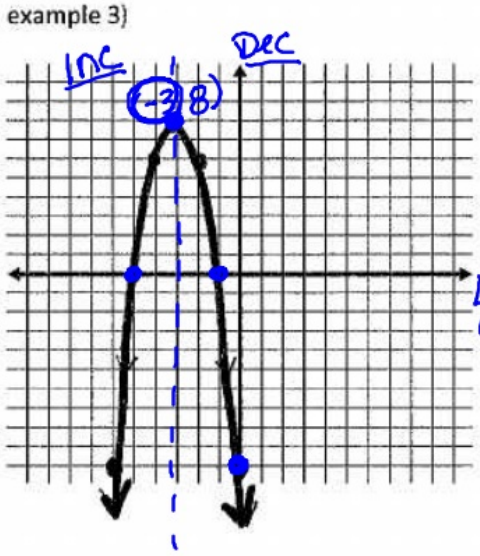
↑ xvalues ↓

cross x

cross y

Domain	$(-\infty, \infty)$
Range	$(-\infty, 4]$
Max/Min	$(0,4)$
Increasing	$(-\infty, 0)$
Decreasing	$(0, \infty)$
x-intercept	$(-2,0)$ & $(2,0)$
y-intercept	$(0,4)$

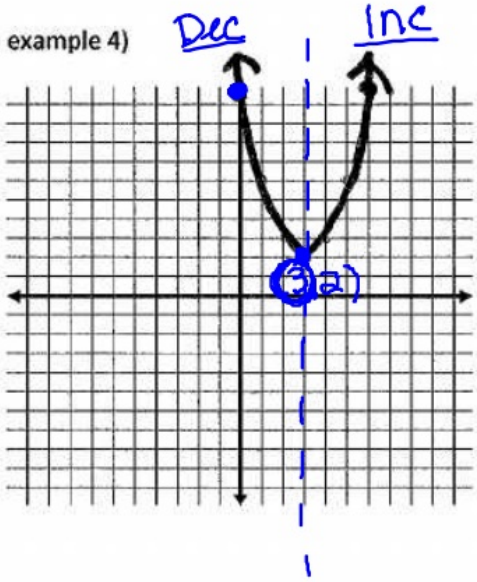
example 3)



x L→R
y B→T
high/low
x
Left to Right
cross x
cross y

Domain (−∞, ∞)
Range (−∞, 8]
Max/Min (-3, 8)
Increasing (−∞, −3)
Decreasing (−3, ∞)
x-intercept (−5, 0) (−1, 0)
y-intercept (0, −10)

example 4)



x L→R
y B→T
high/low
Left to right
x
cross x
cross y

Domain (−∞, ∞)
Range [2, ∞)
Max/Min (3, 2)
Increasing (3, ∞)
Decreasing (−∞, 3)
x-intercept none
y-intercept (0, 10)

Homework: 11/7/12

Handout on analyzing graphs